Contents of Volume 27 (1988)

No. 1 issued March, 1988

R. D. Moir, G. H. Dixon
A Repetitive DNA Sequence in the Salmonid Fishes Similar to a Retroviral Long Terminal Repeat **1**

R. D. Moir, G. H. Dixon
Characterization of a Protamine Gene from the Chum Salmon (*Oncorhynchus keta*) **8**

G. S. Cross, C. Wilson, H. P. Erba, H. R. Woodland
Cytoskeletal Actin Gene Families of *Xenopus borealis* and *Xenopus laevis* **17**

G. K. Scott, P. L. Davies, M. H. Kao, G. L. Fletcher
Differential Amplification of Antifreeze Protein Genes in the Pleuronectinae **29**

D. Cool, D. Banfield, B. M. Honda, M. J. Smith
Histone Genes in Three Sea Star Species: Cluster Arrangement, Transcriptional Polarity, and Analyses of the Flanking Regions of H3 and H4 Genes **36**

M. W. Smith
Structure of Vertebrate Genes: A Statistical Analysis Implicating Selection **45**

P. Harlow, S. Litwin, M. Nemer
Synonymous Nucleotide Substitution Rates of β-Tubulin and Histone Genes Conform to High Overall Genomic Rates in Rodents But Not in Sea Urchins **56**

N. Souillard, M. Magot, O. Possot, L. Sibold
Nucleotide Sequence of Regions Homologous to *nifH* (Nitrogenase Fe Protein) from the Nitrogen-Fixing Archaebacteria *Methanococcus thermolithotrophicus* and *Methanobacterium ivanovii*: Evolutionary Implications **65**

S. Ueda, F. Matsuda, T. Honjo
Multiple Recombinational Events in Primate Immunoglobulin Epsilon and Alpha Genes Suggest Closer Relationship of Humans to Chimpanzees than to Gorillas **77**

Recently Published Papers in the Field of Molecular Evolution **84**

Indexed in *Current Contents*

No. 2 issued April, 1988

A. R. Hill, Jr., S. Kumar, N. J. Leonard, L. E. Orgel
Template-Directed Oligomerization of 3-Isoadenosine 5′-Phosphate **91**

H. Manor, B. S. Rao, R. G. Martin
Abundance and Degree of Dispersion of Genomic $d(GA)_n \cdot d(TC)_n$ Sequences **96**

F. Altruda, V. Poli, G. Restagno, L. Silengo
Structure of the Human Hemopexin Gene and Evidence for Intron-Mediated Evolution **102**

M. I. Granero-Porati, A. Porati
Informational Parameters and Randomness of Mitochondrial DNA **109**

L. F. Abbott
A Model of Autocatalytic Replication **114**

D. Bomar, S. Giovannoni, E. Stackebrandt
A Unique Type of Eubacterial 5S rRNA in Members of the Order Planctomycetales **121**

H. Van den Eynde, R. De Baere, E. De Roeck, Y. Van de Peer, A. Vandenberghe, P. Willekens, R. De Wachter
The 5S Ribosomal RNA Sequences of a Red Algal Rhodoplast and a Gymnosperm Chloroplast. Implications for the Evolution of Plastids and Cyanobacteria **126**

C. J. Nairn, R. J. Ferl
The Complete Nucleotide Sequence of the Small-Subunit Ribosomal RNA Coding Region for the Cycad *Zamia pumila*: Phylogenetic Implications **133**

C. Collet
Recent Origin for a Thermostable Alcohol Dehydrogenase Allele of *Drosophila melanogaster* **142**

P. Tompa
On the Appearance and Role of a Spacer Group in the Protein Amino Acids **147**

N. A. Kolchanov, I. N. Shindyalov
Single Amino Acid Substitutions Producing Instability of Globular Proteins. Calculation of Their Frequencies in the Entire Mutational Spectra of the α- and β-Subunits of Human Hemoglobin **154**

H. J. M. Aarts, J. T. den Dunnen, J. Leunissen, N. H. Lubsen, J. G. G. Schoenmakers
The γ-crystallin Gene Families: Sequence and Evolutionary Patterns **163**

Recently Published Papers in the Field of Molecular Evolution **173**

Indexed in *Current Contents*

No. 3 issued May, 1988

H. Sawai
Oligonucleotide Formation Catalyzed by Divalent Metal Ions. The Uniqueness of the Ribosyl System **181**

N. K. Moschonas, G. Thireos, F. C. Kafatos
Evolution of Chorion Structural Genes and Regulatory Mechanisms in Two Wild Silkmoths: A Preliminary Analysis **187**

Y. Quentin
The Alu Family Developed through Successive Waves of Fixation Closely Connected with Primate Lineage History **194**

M. Blumenberg
Concerted Gene Duplications in the Two Keratin Gene Families **203**

A. Caccone, R. DeSalle, J. R. Powell
Calibration of the Change in Thermal Stability of DNA Duplexes and Degree of Base Pair Mismatch **212**

Ú. Árnason, P. W. Allderdice, J. Lien, B. Widegren
Highly Repetitive DNA in the Baleen Whale Genera *Balaenoptera* and *Megaptera* **217**

H. Vahidi, J. Curran, D. W. Nelson, J. M. Webster, M. A. McClure, B. M. Honda
Unusual Sequences, Homologous to 5S RNA, in Ribosomal DNA Repeats of the Nematode *Meloidogyne arenaria* **222**

S. Colote, J. S. Widada, C. Ferraz, F. Bonhomme, J. Marti, J.-P. Liautard
Evolution of Tropomyosin Functional Domains: Differential Splicing and Genomic Constraints **228**

M. Goodman, J. Pedwaydon, J. Czelusniak, T. Suzuki, T. Gotoh, L. Moens, F. Shishikura, D. Walz, S. Vinogradov
An Evolutionary Tree for Invertebrate Globin Sequences **236**

G. S. Spicer
Molecular Evolution among Some *Drosophila* Species Groups as Indicated by Two-Dimensional Electrophoresis **250**

N. Saitou
Property and Efficiency of the Maximum Likelihood Method for Molecular Phylogeny **261**

Recently Published Papers in the Field of Molecular Evolution **274**

Indexed in *Current Contents*

No. 4 issued August, 1988

Random Walking **281**

A. Lazcano, R. Guerrero, L. Margulis, J. Oró
The Evolutionary Transition from RNA to DNA in Early Cells **283**

S. A. Krawetz, G. H. Dixon
Sequence Similarities of the Protamine Genes: Implications for Regulation and Evolution **291**

H. Saiga, L. Botella, J.-E. Edström
Subrepeats within the BR1β Repeat Unit in *Chironomus pallidivittatus* Can Be Classified into Different Types Depending on Codon Usage **298**

P. N. Kuriyan, R. K. J. Narayan
The Distribution and Divergence during Evolution of Families of Repetitive DNA Sequences in *Lathyrus* Species **303**

D. Mouchiroud, C. Gautier, G. Bernardi
The Compositional Distribution of Coding Sequences and DNA Molecules in Humans and Murids **311**

R. Hanai, A. Wada
The Effects of Guanine and Cytosine Variation on Dinucleotide Frequency and Amino Acid Composition in the Human Genome **321**

E. M. Prager, A. C. Wilson
Ancient Origin of Lactalbumin from Lysozyme: Analysis of DNA and Amino Acid Sequences **326**

G. Qi, G. Cao, P. Jiang, X. Feng, X. Gu
Studies on the Sites Expressing Evolutionary Changes in the Structure of Eukaryotic 5S Ribosomal RNA **336**

E. Weber, M.-R. Chevallier, R. Jund
Evolutionary Relationship and Secondary Structure Predictions in Four Transport Proteins of *Saccharomyces cerevisiae* **341**

C. Perret, N. Lomri, M. Thomasset
Evolution of the EF-Hand Calcium-Binding Protein Family: Evidence for Exon Shuffling and Intron Insertion **351**

Synthesis

A. Lazcano, J. Fastag, P. Gariglio, C. Ramírez, J. Oró
On the Early Evolution of RNA Polymerase **365**

Recently Published Papers in the Field of Molecular Evolution **377**

Index to Volume 27

Indexed in *Current Contents*